Compound	2-Heptenal (read-across from 2- Butenal)		Factsheet
Parameter	Note	Comments	Value / descriptor
EU-LCI value and status			
EU-LCI value	1	Mass/volume [µg/m <sup>3</sup> ]	7
EU-LCI status	2	Draft/final	Final
EU-LCI year of issue	3	Year when the EU-LCI value was issued	2015
General information			
CLP Index No	4	INDEX	-
EC No	5	EINECS — ELINCS — NLP	219-563-0 242-608-0
CAS No	6	Chemical Abstracts Service number	2463-63-0 18829-55-5 57266-86-1 29381-66-6
Harmonised CLP classification	7	Human health risk-related classification	Non harmonised substance
Molar mass and conversion factor	8	[g/mol] and [ppm — mg/m <sup>3</sup> ]	112.17 1 ppm = 4.61 mg/m <sup>3</sup>
Key data / database			
Key study, author(s), year	9	Critical study with lowest relevant effect level	
Read-across compound	10	Where applicable	2-butenal
Species	11	Rat etc. / human	
Route/type of study	12	Inhalation, oral feed, etc.	
Study length	13	Days, subchronic, chronic	
Exposure duration	14	Hours/day, days/week	
Critical endpoint	15	Effect(s), site of	
Point of departure (POD)	16	LOAEC*L, NOAEC*L, NOEC*L, benchmark dose, etc.	POD/TAF in EU-LCI factsheet for 2-butenal
POD value	17	[mg/m <sup>3</sup> ] or [ppm] or [mg/kg <sub>BW</sub> ×d]	$0.002 \text{ ppm or } 0.005 \text{ mg/m}^3$
Assessment factors (AF)	18		
Adjustment for exposure duration	19	Study exposure hours/day, days/week	-
Study length	20	$sa \rightarrow sc \rightarrow c$ (R8-5)	-
Route-to-route extrapolation factor	21		-
Dose-response	22 a	Reliability of dose-response, LOAEL $\rightarrow$ NOAEL	-
	22 b	Severity of effect (R 8-6d)	-
Interspecies differences	23 a	Allometric Metabolic rate ( <i>R8-3</i> )	-
	23 b	Kinetic + dynamic	-
Intraspecies differences	24	Kinetic + dynamic Worker — general population	-
AF (sensitive population)	25	Children or other sensitive groups	-

Other adjustment factors Quality of whole database	26	Completeness and consistency Reliability of alternative data ( <i>R8-6 d,e</i> )	-		
Result					
Summary of assessment factors	27	Total Assessment Factor (TAF)			
POD/TAF	28	Calculated value (µg/m <sup>3</sup> and ppb)	5.31 $\mu g/m^3$ and 1.85 ppb		
Molar adjustment factor	29	Used in read-across	1.4 (= 98.14/70.08)		
Rounded value	30	[µg/m³]	7		
Additional comments	31				
Rationale section	32				
Rationale for read-across and assessment factors					

- Given the lack of data to perform a de novo LCI derivation, the derivation of the LCI value for 2-heptenal is based on read-across from 2-butenal
- Read-across candidate compounds for starting value: within the chemical class of 'unsaturated aldehydes' 2-butenal is the closest homologue.
- Toxicological critical endpoints for homologue compound:
  - o 2-butenal: irritation
  - The key assumption underlying the read-across of the EU-LCI value from 2-butenal to 2-heptenal is that both compounds have the same critical endpoint.
- Cut-off rule in place: difference in change length between the two homologue compounds is higher than two CH<sub>2</sub> groups per aliphatic chain.

Thus, the unrounded EU-LCI value for 2-heptenal is 5.31  $\mu$ g:m<sup>3</sup> x 1.4 = 7.436  $\mu$ g/m<sup>3</sup>  $\rightarrow$  to be rounded to 7  $\mu$ g/m<sup>3</sup>.